### **IEEE P802.11Wireless LANs**

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| PDT AMP Downlink PPDU Format |
| Date: 2025-09-15 |
| Author(s): |
| Name | Affiliation | Email |
| Steve Shellhammer | Qualcomm Technologies, Inc. | shellhammer@ieee.org |
| Nelson Costa | HaiLa Technologies | nelson@haila.io |
| You-Wei Chen | MediaTek | you-wei.chen@mediatek.com |
| Yinan Qi | Oppo | v-qiyinan@oppo.com |
| Rui Cao | NXP | rui.cao\_2@nxp.com |
| Weijie Xu | Oppo | xuweijie@oppo.com |
| Panpan Li | Huawei | lipanpan25@huawei.com |
| Bin Qian | Huawei | qianbin14@huawei.com |
| Ke Wang | Oppo | wangke6@oppo.com |
| Lei Zhou | New H3C | zhou.leih@h3c.com |
| Amichai Sanderovich | Wiliot | amichai.sanderovich@wiliot.com |
| Shengquan Hu | MediaTek | shengquan.hu@mediatek.com |
| Solomon Trainin | Wiliot | solomon.trainin@wiliot.com |
| Yuxiao Hou | TP-Link Systems Inc. | houyuxiao@tp-link.com.hk |
| Leif Wilhelmsson | Ericsson | leif.r.wilhelmsson@ericsson.com |
| Fang Juan | Intel | Juan.fang@intel.com |
| Alice Chen | Qualcomm Technologies, Inc | alicel@qti.qualcomm.com |

**Introduction**

This document provides proposed draft text for IEEE 802.11bp draft.

The following Motions apply to this PDT:

* **PM-5**: IEEE 802.11bp will specify, in 2.4 GHz, an AMP Downlink PPDU containing at least an 802.11 preamble field, an AMP-Sync field and an AMP-Data field. Inclusion of an AMP-SIG field is TBD.
	+ The details of the 802.11 preamble field are TBD.
	+ Additionally, for transmission to backscatter STAs there will be one or more Excitation fields
	+ Additionally, for transmission to backscatter STAs there may be more than one AMP-Data field
		- Additionally, AMP-Sync and AMP-SIG field may precede each AMP-Data field
	+ Name of this Downlink PPDU is TBD.

[Motion #8, [1] and [7]]

* **PM-38**: 11bp defines two PPDU variants of the AMP DL PPDU for backscattering operation in 2.4GHz.
	+ PPDU subtype 1 consists of the 802.11bp preamble, an Excitation field, an AMP SYNC field, and an AMP Data field and an Excitation field



* + PPDU subtype 2 consists of the 802.11bp preamble, an AMP SYNC field, and an AMP Data field and an Excitation field.



* [Motion #88, [1] and [90]]

***TGbp editor: Please add the following subclause 40.3.2.1:***

**40.3.2.1 DL AMP PPDU formats**

There are three AMP Downlink PPDU Formats: *NAMETBP1*, *NAMETBD2*, and *NAMETBD3*. The *NAMETBD1* is transmitted to a non-backscatter STA. The *NAMETBD2* is transmitted to a backscatter STA. The *NAMETBD3* is transmitted to a backscatter STA.

 Figure 40-X1 shows the *NAMETBD1* format, Figure 40-X2 shows the *NAMETBD2* format, and Figure 40-X3 shows the *NAMETBD3* format.

**Figure 40-X1 – *NAMETBD1* format**



**Figure 40-X2 – *NAMETBD2* format**



**Figure 40-X3 – *NAMETBD3* format**



The fields of the AMP Downlink PPDU formats are summarized in Table 40-Y1.

**Table 40-Y1 – Fields of the AMP Downlink PPDUs**

|  |  |
| --- | --- |
| **Field** | **Description** |
| L-STF | Non-HT Short Training field (see 40.3.8.2.1) |
| L-LTF | Non-HT Long Training field (see 40.3.8.2.1) |
| L-SIG | Non-HT SIGNAL field (see 40.3.8.2.1) |
| RL-SIG | Repeated Non-HT SIGNAL field (see 40.3.8.2.1) |
| U-SIG | Universal SIGNAL field (see 40.3.8.2.1) |
| AMP-Excitation | AMP Excitation (see TBD) |
| AMP-Sync | AMP Downlink Synchronization field (see 40.3.8.2.2) |
| AMP-SIG (TBD) | AMP SIG (see TBD) |
| AMP-Data | AMP Downlink Data field carrying the PSDU (see 40.3.9) |